## **CONTENTS OF 109B**

Vol. 109B, No. 1

Review		
Walter R. Terra and Clélia Ferreira	1	Insect digestive enzymes: properties, compartmentalization and function
General Papers		
Luc P. Belzunces, Christophe Lenfant, Sylvie Di Pasquale and Marc-Edouard Colin	63	In vivo and in vitro effects of wheat germ agglutinin and Bowman-Birk soybean trypsin inhibitor, two potential transgene products, on midgut esterase and protease activities from Apis mellifera
Kee Min Woo, Woelsung Yi, Young Jong Sohn, Chung-Soon Chang, Man-Sik Kang, Doo Bong Ha and Chin Ha Chung	71	Purification and characterization of a poly-L-lysine-activated serine endoprotease from <i>Lumbricus rubellus</i>
Huai-Jen Tsai, Su-Ru Shih, Ching-Ming Kuo and Lu-Ku Li	81	Molecular cloning of the common carp (Cyprinus carpio) rhodopsin cDNA
G. Feller, A. Poncin, M. Aittaleb, R. Schyns and Ch. Gerday	89	The blood proteins of the Antarctic icefish <i>Channichthys rhinoceratus</i> : biological significance and purification of the two main components
Carol Minassian and Gilles Mithieux	99	Differential time course of liver and kidney glucose-6 phosphatase activity during fasting in rats
Keiji Kurata, Masatoshi Nakamura, Takashi Okuda, Hisashi Hirano and Hiroshi Shinbo	105	Purification and characterization of a juvenile hormone binding protein from hemolymph of the silkworm, Bombyx mori
Yuji Ito, Takeshi Suzuki, Takaaki Shirai and Toshiyuki Hirano	115	Presence of cyclic betaines in fish
Sonja Jespersen, Peter Højrup, Svend Olav Andersen and Peter Roepstorff	125	The primary structure of an endocuticular protein from two locust species, <i>Locusta migratoria</i> and <i>Schistocerca gregaria</i> , determined by a combination of mass spectrometry and automatic Edman degradation
Uma Sabapathy and L. H. Teo	139	Some kinetic properties of amylase from the intestine of the rabbitfish, Siganus canaliculatus (Park)
C. F. Phleger and S. R. Wambeke	145	Bone lipids and fatty acids of Peru fish
Elsa Meinardi, Julio M. Azcurra, Monica Florin-Christensen and Jorge Florin-Christensen	153	Coelenterolysin: a hemolytic polypeptide associated with the coelenteric fluid of sea anemones
Donald L. Lovett, David W. Towle and Jason E. Faris	163	Salinity-sensitive alkaline phosphatase activity in gills of the blue crab, Callinectes sapidus Rathbun
	i	Announcement
	iii	Comparative Biochemistry and Physiology B Bibliography

Vol. 109B, No. 2/3

Invited Review
M. Guppy, C. J. Fuery
and J. E. Flanigan

175 Biochemical principles of metabolic depression

Mini Reviews		
Jeffrey G. Scott and Ke Dong	191	kdr-Type resistance in insects with special reference to the German cockroach, Blattella germanica
Norbert H. Haunerland	199	Fatty acid binding protein in locust and mammalian muscle. Comparison of structure, function and regulation
General Papers		
S. L. Jacobsen, S. O. Andersen and P. Højrup	209	Amino acid sequence determination of a protein purified from the shell of the shrimp, <i>Pandalus borealis</i>
K. L. Gayathri and S. N. Hegde	219	Sexual differences in blood values of the pigeon, Columba livia
Marie Azzaria, William J. Henzel and James D. McGhee	225	A carboxylesterase from the parasitic nematode Ascaris suum homologous to the intestinal-specific ges-1 esterase of Caenorhabditis elegans
Leslie A. King	237	Adult and fetal hemoglobins in the oviparous swell shark, Cephaloscyllium ventriosum
William W. Christie, Elizabeth Y. Brechany, Ilko N. Marekov, Kamen L. Stefanov and Stoitze N. Andreev	245	The fatty acids of the sponge Hymeniacidon sanguinea from the Black Sea
Alison Pearce, Adam F. Durkin, Michael J. Fisher, Huw H. Rees, Claire F. Taylor and David G. Fernig	253	A novel tyrosine kinase activity in the cotton leafworm, Spodoptera littoralis
Fabrizio Ceciliani, Hugo L. Monaco, Severino Ronchi, Ludovica Faotto and Paola Spadon	261	The primary structure of a basic (pI 9.0) fatty acid-binding protein from liver of Gallus domesticus
David S. Chance and Michael K. McIntosh	273	Rates of beta-oxidation of fatty acids of various chain lengths and degrees of unsaturation in highly purified peroxisomes isolated from rat liver
D. E. Grum, L. R. Hansen and J. K. Drackley	281	Peroxisomal $\beta$ -oxidation of fatty acids in bovine and rat liver
Dennis R. Nelson, James S. Buckner and Charlotte L. Fatland	293	The composition of external lipids from adult whiteflies, Bemisia tabaci and Trialeurodes vaporariorum
Masaaki Kurata and Masatoshi Suzuki	305	Glutathione regeneration in calcium-loaded erythrocytes: a possible relationship among calcium accumulation, ATP decrement and oxidative damage
Colleen A. Caldwell and Jeffrey M. Hinshaw	313	Nucleotides and adenylate energy charge as indicators of stress in rainbow trout ( <i>Oncorhynchus mykiss</i> ) subjected to a range of dissolved oxygen concentrations
A. Lazou and A. Frosinis	325	Kinetic and regulatory properties of pyruvate kinase from <i>Artemia</i> embryos during incubation under aerobic and anoxic conditions. The effect of pH on the kinetic constants
M. Cunningham, R. Pollero and A. González	333	Lipid circulation in spiders. Transport of phospholipids, free acids and triacylglycerols as the major lipid classes by a high-density lipoprotein fraction isolated from plasma of Polybetes pythagoricus
Stephen C. Trowell, Eric R. Hines, Anthony J. Herlt and Rodney W. Rickards	339	Characterization of a juvenile hormone binding lipophorin from the blowfly Lucilia cuprina
Jesus Sanchez-Yagüe, Marina C. Rodriguez, Marcial Llanillo and Angel Hernandez-Hernandez	359	The effect of GTP on the aluminum fluoride- and forskolin- activated adenylyl cyclase from human embryonic kidney 293 cells

Liesl De Sevilla, Sylvia A. McCune and Michael E. White	371	Insulin-like growth factor mRNA expression in tissues of lean and obese male SHFF/Mcc- $fa^{cp}$ rats
Kurt Aitzetmüller, Horst Taraschewski, Christin Filipponi, Gisela Werner and Nikolaus Weber	383	Lipids of fish parasites and their hosts: fatty acids of phospholipids of <i>Paratenuisentis ambiguus</i> and its host eel (Anguilla anguilla)
P. Vorger	391	Oxygen binding properties of blood and hemoglobin from the pigeon Columba livia
Tomáš Řezanka and Valery M. Dembitsky	407	Identification of unusual cyclopropane monounsaturated fatty acids from the deep-water lake invertebrate Acanthogammarus grewingkii
Valery M. Dembitsky, Tomáš Řezanka and Andrey G. Kashin	415	Comparative study of the endemic freshwater fauna of Lake Baikal—VI. Unusual fatty acid and lipid composition of the endemic sponge <i>Lubomirskia baicalensis</i> and its amphipod crustacean parasite <i>Brandtia</i> (Spinacanthus) parasitica
Michael A. Tranulis, Berit Christophersen and Borgar Borrebaek	427	Glucose dehydrogenase in beef (Bos taurus) and rainbow trout (Oncorhynchus mykiss) liver: a comparative study
O. Mejía, F. León-Velarde and C. Monge-C.	437	The effect of inositol hexaphosphate in the high-affinity hemo- globin of the Andean chicken (Gallus gallus)
T. C. Koekemoer, LA. Stanton and W. Oelofsen	443	Kinetic properties of ovine adipose tissue fructose-1,6-bisphosphatase
Laurence Marchat, Philippe M. Loiseau, Christian Poüs and Farrethin Petek	451	Isoenzymatic diagnosis of filariae: a method for separation of lactate dehydrogenase isoenzymes from <i>Molinema dessetae</i> (Nematoda: Filarioidea)
William E. Seifert Jr, Steve W. Gotte, Thomas L. Leto and Paul J. Weldon	459	Lipids and proteins in the Rathke's gland secretions of the North American mud turtle (Kinosternon subrubrum)
Sheila Nadkarni and Sailen Mookerjea	465	Relationship between plasmin-trypsin-inhibitory and sialyl-transferase activities
Charlotte Wallaert and Patrick J. Babin	473	Effects of temperature variations on dietary lipid absorption and plasma lipoprotein concentrations in trout (Oncorhynchus mykiss)
Judy A. Westrick and Andrew Smolen	489	Aminotransferase activities in mouse, Mus domesticus, erythrocytes separated according to age
Dominique Dorin, Marie-France Sire and Jean-Marie Vernier	499	Demonstration of an antibody response of the anterior kidney following intestinal administration of a soluble protein antigen in trout
G. D. Engelbrecht, F. H. Van der Bank and P. F. S. Mulder	511	Allozyme variation in Schilbe intermedius Rüppel, 1832 (Pisces, Siluriformes) from the upper Zambezi River System
	i	Comparative Biochemistry and Physiology B Bibliography

Vol. 109B, No. 4

P. W. Hochachka and T. P. Mommsen (Editors-in-Chief)

519 In appreciation

Review
J. C. Salvado, N. Bensaadi-Merchermek and C. Mouchès

531 Transposable elements in mosquitoes and other insect species

T. Matsubara, T. Wada and A. Hara	545	Purification and establishment of ELISA for vitellogenin of Japanese sardine (Sardinops melanostictus)
Song-Yu Yang	557	The large subunit of the pig heart mitochondrial membrane- bound $\beta$ -oxidation complex is a long-chain enoyl-CoA hydratase: 3-hydroxyacyl-CoA dehydrogenase bifunctional enzyme
R. R. Tewari and S. Thakur	567	Malate dehydrogenase isozymes in five species of sarcophagid flies (Sarcophagidae: Diptera)
D. J. Pehowich	571	Modification of skeletal muscle sarcoplasmic reticulum fatty acyl composition during arousal from hibernation
A. Viarengo, R. Accomando, G. Roma, U. Benatti, G. Damonte and M. Orunesu	579	Differences in lipid composition of cell membranes from Antarctic and Mediterranean scallops
P. M. Brophy, A. Ben-Smith, A. Brown, J. M. Behnke and D. I. Pritchard	585	Glutathione S-transferases from the gastrointestinal nematode Heligmosomoides polygyrus and mammalian liver compared
A. C. Cohen and D. L. Hendrix	593	Demonstration and preliminary characterization of $\alpha$ -amylase in the sweetpotato whitefly, <i>Bemisia tabaci</i> (Aleyrodidae: Homoptera)
R. A. Irvine and T. N. Seyfried	603	Phylogenetic conservation of ganglioside GD3 expression during early vertebrate ontogeny
T. Motokawa	613	Effects of ionic environment on viscosity of Triton-extracted catch connective tissue of a sea cucumber body wall
B. Bénéteau-Burnat, A. Tahraoui, F. Barbut, J. Giboudeau and B. Baudin	623	Physicochemical and immunological comparisons between angiotensin I-converting enzymes purified from different mammalian species
P. Becuwe, J. van Beeumen, B. Samyn, J. P. Touzel, C. Slomianny, D. Camus and D. Dive	637	Purification, characterization and amino terminal sequence of the superoxide dismutase from Babesia hylomysci
A. Arai, H. Mitani, K. Naruse and A. Shima	647	Relationship between the induction of proteins in the HSP70 family and thermosensitivity in two species of Oryzias (Pisces)
D. Schlenk and R. Li-Schlenk	655	Characterization of liver flavin-containing monooxygenase of the dogfish shark ( <i>Squalus acanthias</i> ) and partial purification of liver flavin-containing monooxygenase of the silky shark ( <i>Carcharhinus falciformis</i> )
T. Kyrklund and J. Meijer	665	Lipid composition of liver peroxisomes isolated from untreated and clofibrate-treated mice and rats
M. E. R. Dugan, D. A. Knabe and G. Wu	675	Glutamine and glucose metabolism in intraepithelial lymphocytes from pre- and post-weaning pigs
N. Carvajal, E. Uribe and C. Torres	683	Subcellular localization, metal ion requirement and kinetic properties of arginase from the gill tissue of the bivalve Semele solida
V. Consalvi, R. Chiaraluce, S. Millevoi, A. Pasquo, L. Politi, M. De Rosa and R. Scandurra	691	NAD-dependent glutamate dehydrogenase from the thermophilic eubacterium Bacillus acidocaldarius
G. O. Bonilla, S. Oyama Jr, C. L. Nagatomo, M. S. A. Matsuura and A. Focesi Jr	701	Interactions of adenosine triphosphate with snake hemo- globins. Studies in <i>Liophis miliaris</i> , <i>Boa constrictor</i> and <i>Bothrops alternatus</i>
L. Stabili and P. Pagliara	709	Antibacterial protection in <i>Marthasterias glacialis</i> eggs: characterization of lysozyme-like activity

## G. Degani, E. Gal and J. Vaya

- 715 In vitro biosynthesis of steroids in ovary of asynchronic Trichogaster trichopterus (Pallus, 1770)
- 725 Announcement
  - i Comparative Biochemistry and Physiology B Bibliography
  - I Volume Contents, Subject and Author Index for Volume 109B

Reproduced with the permission of Pergamon Press Inc., by University
Microfilms Inc. Duplication or resale without permission is prohibited.

